



What is claimed:

Claims 1 through 41 canceled.

42. (New) A rotary piston continuous flow positive and dynamic displacement expansible chamber device comprising;

a hollow toroid cylinder housing with a smooth inner surface;

a shaft having a longitudinal rotational axis aligned to a center of said toroid cylinder housing;

a rotor mounted for rotation with said shaft;

at least one piston mounted radially on said rotor for circular movement in said housing when said rotor is rotated, each said piston having a conformably shaped outer peripheral surface in relation to said cylinder housing;

an intake port through said housing to allow a working fluid to enter said hollow housing;

at least one isolating valve conformably shaped and associated with a respective piston and said hollow cylinder housing pivotably connected at one end to said housing upstream and before said intake port, another end of said isolating valve being in sliding contact with said conformably shaped outer peripheral surface of said associated piston and said rotor following said conformably shaped surface;

an accumulator area formed downstream of said valve starting  
at the downstream side of said intake port and ending at  
a top seal point, said top seal point formed at a point that said  
piston seals with said smooth inner surface of said hollow cylinder;  
an exhaust port for the discharge of said working fluid from  
said housing, said exhaust port located downstream on the periphery  
of said toroid cylinder and after said piston and fluid's function is  
completed.

43. (New) A rotary piston continuous flow positive and  
dynamic displacement expansible chamber device according to  
claim 42, wherein said pistons further comprise;

a plurality of piston rings mounted in ring grooves on  
said pistons.

44. (New) A rotary piston continuous flow positive and  
dynamic displacement expansible chamber device according to  
claim 42, wherein said valve has means for the attachment of  
external controls said controls comprising;

201

a valve pivot shaft extending through to the outside of  
said cylinder area with means for attachment to  
an external control lever thereto attached to  
a rotating cam that is in synchronization with the rotation  
of said rotor and pistons, said lever rides on said external cam  
a governor rotably connected to said rotating cam that as  
the revolutions increase said governor limits the extent of the  
closing travel of said valve in synchronization with the  
approaching and passing of said piston thus forcing said valve  
to progressively wave and flutter rhythmically, not closing  
completely, acting as a fluidic amplifier at higher revolutions,  
said external controls thus also prevent contact by said valve  
and said rotor and pistons thereby significantly reducing wear  
to said components.

45. (New) A rotary piston continuous flow positive and  
dynamic displacement expansible chamber device according to  
claim 43, wherein said valve has means for the attachment of  
external controls, said controls comprising;

a valve pivot assembly with means for attachment to

an external control lever attached to  
a rotating cam that is in synchronization with the rotation  
of said rotor and pistons, said lever rides on said external cam  
a governor that limits the extent of the closing travel of  
said valve in synchronization with the approaching and passing  
of said piston thus forcing said valve to act as a fluidic  
amplifier at higher revolutions, said external controls thus  
preventing contact by said valve and said rotor and pistons  
preventing excessive wear to said components.

46. (New) A rotary piston continuous flow positive and dynamic  
displacement expansible chamber device according to claim 42,  
wherein said valve is spring loaded in the closed position and  
(reversed horizontally in position) relative to the rotation of said  
rotor making the leading sliding edge of said valve face the  
slope of said <sup>at least one</sup> approaching pistons, said exhaust port is located  
just upstream along the periphery of said hollow toroid cylinder  
housing.

47. (New) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 46, wherein said pistons further comprise;

a plurality of piston rings mounted in ring grooves on said pistons.

48. (New) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 46, wherein said conformably shaped isolating valve further comprises;

a roller on its underside suspending said valve at close tolerance above said rotor and pistons, said roller suspending said valve at close tolerance above said rotor and pistons thereby minimizing friction and wear to said components.

49. (New) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 43, wherein said valve further comprises;

a spring that keeps said valve pressed against said conformably shaped rotor and pistons even in the absence of said fluid flow.

50. (New) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 42 wherein said conformably shaped isolating valve further comprises;

a roller on its underside suspending said valve at close tolerance above said rotor and pistons, said roller suspending said valve at close tolerance above said rotor and pistons, thereby, minimizing friction and wear to said components.

51. (New) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 43 wherein said conformably shaped isolating valve further comprises;

a roller on its underside suspending said valve at close tolerance above said rotor and pistons, said roller suspending

said valve at close tolerance above said rotor and pistons  
thereby minimizing friction and wear to said components.

52. (New) A continuous internal combustion positive and dynamic  
displacement passive compression compound cycle rotary engine  
comprising;

a rotary piston continuous flow dynamic displacement  
expansible chamber device comprising;

a hollow toroid cylinder housing with a smooth inner surface;

a shaft having a longitudinal rotational axis aligned to a center  
of said toroid cylinder housing;

a rotor mounted for rotation with said shaft;

at least one piston mounted radially on said rotor for circular  
movement in said housing when said rotor is rotated, each said piston  
having a conformably shaped outer peripheral surface in relation to  
said cylinder housing;

an intake port through said housing to allow a working fluid to  
enter said hollow housing;

at least one isolating valve conformably shaped and associated with a respective piston and said hollow cylinder housing pivotably connected at one end to said housing upstream and before said intake port, another end of said isolating valve being in sliding contact with said conformably shaped outer peripheral surface of said associated piston and said rotor following said conformably shaped surface;

an accumulator area formed downstream of said valve starting at the downstream side of said intake port and ending at a top seal <sup>SP</sup> point, said top seal point formed at a point that said piston seals with said smooth inner surface of said hollow cylinder;

an exhaust port for the discharge of said working fluid from said housing, said exhaust port located downstream on the periphery of said toroid cylinder and after the fluid's function is completed;

a combustor mounted over said intake port allowing for combustion gases to be channeled into said toroid cylinder, said combustor comprising;

a means for attachment of fuel and air supply lines and means for igniting said mixture.



53. (New) A rotary piston continuous flow dynamic displacement continuous internal combustion engine according to claim 52, wherein said pistons further comprise;  
a plurality of piston rings mounted in ring grooves on said pistons.

54. (New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said device has means for attaching;

a pressurizing air canister to the air lines entering its combustor supplying start up air for combustion negating the need for an electric starter.

55. (New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 53, wherein said device has means for attaching;

a pressurizing air canister to the air lines entering its combustor supplying start up air for combustion negating the need for an electric starter.

56.(New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said combustor comprises;

a precombustion chamber also known as an inner stratified flashover reaction cage in its concentric configuration and a means for attachment of fuel and air supply lines and means for igniting said mixture.

57.(New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 53, wherein said combustor comprises;

a precombustion chamber and a means for attachment of fuel and air supply lines and means for igniting said mixture.

58. (New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said conformably shaped isolating valve further comprises;

a roller on its underside suspending said valve at close tolerance above said rotor and pistons, thereby minimizing friction and wear to said components.

59. (New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said exhaust port has means for attaching;

hS  
a turbo charger for supplying air to said combustor.

60. (New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said valve further comprises;

101  
a spring that keeps said valve pressed against said conformably shaped rotor and pistons even in the absence of said combustion flow.

61. (New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 53, wherein said valve further comprises and has means for the attachment of external controls, said controls comprising;

a valve pivot assembly with means for attachment to an external control lever attached to

a rotating cam that is in synchronization with the rotation of said rotor and pistons, said lever rides on said external cam;

a governor that limits the extent of the closing travel of said valve in synchronization with the approaching and passing of said piston thus forcing said valve to act as a fluidic amplifier at higher revolutions, said external controls thus preventing contact by said valve and said rotor and pistons preventing excessive wear to said components.

62.(New) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said combustor further comprises;

a diffuser located after said combustor in said accumulator area that directs combustion while aiding compression due to the reduction in said flow causing increases in pressure.

---